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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BRINSON, PATRICK F

ART UNIT PAPER NUMBER

3752

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,408

Applicant(s)

WEEKS, KEVIN WILLIAMS

Examiner

Patrick F. Brinson

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter recited in claims 1 and 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Claims 1 and 7 recite that the tabs are folded about a “fold axis”. The fold axis is not pointed out in the figures. It is assumed that the fold axis runs parallel to the edge of the tab that remains attached to the elongate sheet (the fold portion). The claim further recites, however, that the tab reduces dimension parallel to the fold axis between the fold portion and the free end. The figures illustrate the tabs reducing in dimension perpendicular to the edge about which the tabs are folded.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the method of forming the tube as described in the specification, i.e., there's no apparatus for forming the sheet into a tube and no device shown that simultaneously punches the tabs. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A

proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 7 both recite new matter including, "...such that the folded tabs cannot translate relative to each other in a direction orthogonal to the fold axis and parallel to the inner and outer overlap portions." There is no support in the specification and this cannot be ascertained from the figures.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 715,910 to **Hardt** in view of US 3,824,757 to **Coop** and US 518,767 to **Plecker**.

The **Hardt** reference discloses a duct (11) formed of sheet metal and it is shown from fig. 1 that the duct includes over lapping edges to define an overlap region having inner and outer overlap portions. The inner and outer overlap portions are simultaneously punched by device (54) to form tabs (76, 77), as recited in claim 4. Each tab includes a fold portion and a free end extending away from the fold portion, and the tabs are aligned such that the tab defined in the overlap portion is directly beneath the tab defining the overlap portion. The tabs are folded inwardly about a fold axis and are fixed together, and are formed at regular intervals along the length of the tube, as recited in claims 2 and 5. The **Hardt** reference does not disclose the duct being formed in a tubular shape nor does it disclose the tabs as reducing in dimension from the fold axis to the free end. The patent to **Coop** discloses a method of forming

a tubular shape duct (20) from an elongate sheet of material. Fig. 12 discloses the lateral edges (21, 22) overlapping to define an inner overlapping and outer overlapping portion. Figs. 2 and 3 disclose the outer overlapping tab (62), having folded portions and free ends (29, 30) and under overlapping tab, including free ends (25, 26). The patent to **Plecker** discloses a pipe formed from sheet metal also including tabs (b), fig. 3, that mate with apertures (a) when the opposing edges of the sheet metal overlap to form the tube structure. The tabs reduce in dimension from the fold axis to the free end, thereby forming a V shape. Page 2, col. 1, discloses that the tabs are formed in a V-shaped manner to aid in insertion of the tab into opposing apertures. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the duct of **Hardt** into a tubular shape as suggested by **Coop** wherein it is known that tubular ducts formed of sheet metal may be formed in a variety of cross sections, including tubular or rectangular, and it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the tabs of **Hardt** to reduce in dimension from the fold axis to the free ends, thereby forming V or U shaped tabs, as suggested by **Plecker** in order to reduce the difficulty in inserting the tabs into opposing apertures.

6. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 3,824,757 to **Coop** in view of US 518,767 to **Plecker**.

The patent to **Coop** discloses an elongate sheet of material formed into a tubular shape (20), having its lateral edges (21, 22), fig. 12, overlapping to define an inner overlapping and outer overlapping portion. Figs. 2 and 3 disclose the outer overlapping tab (62), having folded portions and free ends (29, 30) and under overlapping tab, including free ends (25, 26). Fig. 4 discloses the inwardly directed tabs being aligned such that the tab defined as the inner overlapping portion lies directly beneath the tab (62) defined as the outer overlapping portion with the tabs being folded at the fold portions about a fold axis, such that the tabs are fixed together. Figs. 8-10 disclose the method of forming the tube with tabs and it is shown that the tabs are provided at regular intervals along the length of the tube, as recited in claim 10. Col. 5, lines 9-14, discloses that pressure rollers (59, 60) are applied to the opposite surfaces of portions (21, 22) to crimp the legs to form the joint and slits are pressed together by the rollers to complete a fluid tight seam, thereby insuring that the folded tabs cannot translate relative to each other in a direction orthogonal to the fold axis nor parallel to the inner and outer overlap portions, as recited in claim 7. **Coop** discloses all of the recited structure, with the exception of disclosing the tabs reduce in dimension between the fold portion and the free end. The patent to **Plecker** discloses a pipe formed from sheet metal also including tabs (b), fig. 3, that mate with apertures (a) when the opposing edges of the sheet metal overlap to form the tube structure. The tabs reduce in dimension from

the fold axis to the free end, thereby forming a V shape. Page 2, col. 1, discloses that the tabs are formed in a V-shaped manner to aid in insertion of the tab into opposing apertures. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the tabs of **Coop** to reduce in dimension from the fold axis to the free ends, thereby forming V or U shaped tabs, as suggested by **Plecker** in order to reduce the difficulty in inserting the tabs into opposing apertures.

Response to Amendment

7. Applicant argues that the subject matter in claim 4 regarding the simultaneous punching of the tabs is contained within the original claims and there for in the Applicant may amend the specification to include the claimed subject matter. Applicant has amended the specification to include the language recited in original claim 4. However, the subject matter regarding the tabs not translating relative to each other in a direction orthogonal to the fold axis was not recited in an original claim nor is it discussed in the original specification. This feature is also not clearly shown in the figures.

Applicant is correct in stating that neither **Plecker** nor **Coop** provide the step of forming the tube prior to the punching of the inner and outer overlap portions, however, the **Hardt** reference clearly discloses the duct (11) being formed with overlapping portions in place prior to the punching step. In response to Applicant's

arguments that the **Coop** reference does not disclose tabs bending about a fold axis so that the inner overlap portion lies directly beneath the outer overlap portion, it is the Examiner's position that each tab of **Coop** teaches two fold axes and the free ends are bent about each axis, whereby the inner overlap portion is directly beneath the outer overlap portion, as discussed in the preceding paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (703) 308-0111. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, reading "Patrick F. Brinson". The signature is written in a cursive style with a large, stylized "P" and "B".

Patrick F. Brinson

Primary Examiner

Art Unit 3752

P. F. Brinson

May 10, 2004